Appendix

Hypobaric Chamber Flight Profiles

MEDICAL CLEARANCE

A-1. All personnel must have a current flight physical and a current DA Form 4186 (Medical Recommendation for Flying Duty) indicating FFD before participating in any hypobaric chamber exercise.

PURPOSE OF HYPOBARIC TRAINING

A-2. The purpose of hypobaric chamber training is to safely demonstrate—

- Crew-member limitations associated with hypoxia at altitude.
- Effects of trapped-gas problems on the body.
- Effects of hypoxia on night vision.
- Capabilities of oxygen equipment.

CHAMBER PROFILES AND APPLICABILITY OF TRAINING

A-3. Figures A-1 through A-5 show the standard flight chamber profiles. For information regarding nonstandard profiles, contact USASAM, ATTN MCCS-HA, Fort Rucker, Alabama 36362-5377.

A-4. The procedures for the profile in Figure A-1 are as follows:

- Begin 30-minute denitrogenation.
- Perform 5,000-foot ear and sinus check by 2,500 feet per minute.
- Ascend main accumulator, and lock to 8,000 feet by 2,500 feet per minute.
- Ascend main accumulator, and lock to 18,000 feet by 5,000 feet per minute.
- Perform running break of main accumulator and lock; maintain lock at 18,000 feet.
- Continue main accumulator ascent to 35,000 feet by 5,000 feet per minute.
- Descend main accumulator to 30,000 feet for 90-second hypoxia demonstration.
- Descend main accumulator, and lock to 25,000 feet by 5,000 feet per minute.
- Begin five-minute hypoxia demonstration.
- Descend lock to ground level by 5,000 feet per minute.

- Descend main accumulator to 18,000 feet by 5,000 feet per minute for night-vision demonstration.
- Descend main accumulator from 18,000 feet to ground level by 2,500 feet per minute.
- Terminate chamber flight.

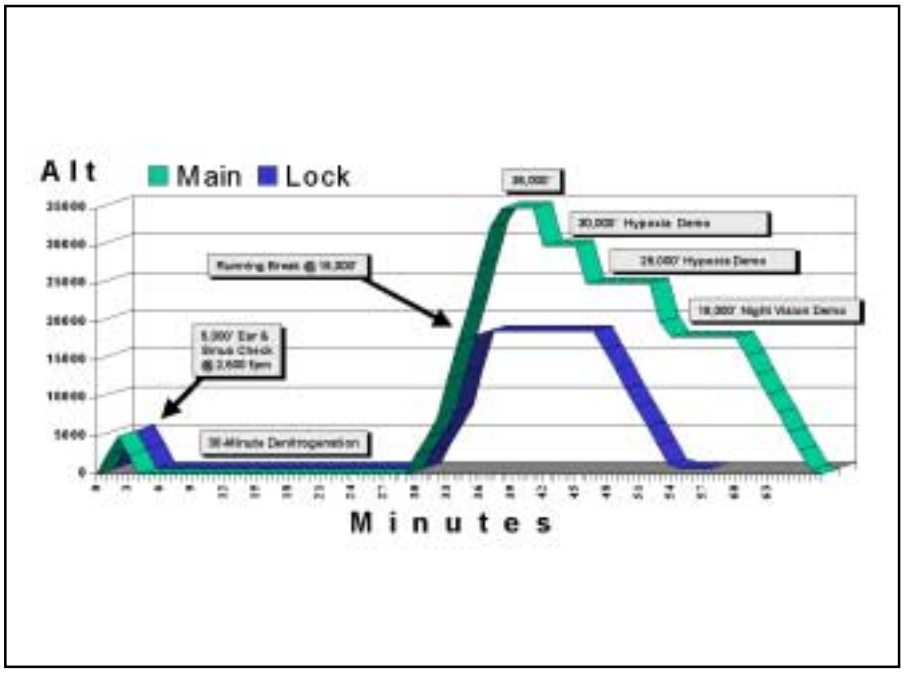

Figure A-1. Type II 35,000-Foot USAF Original Training Profile

A-5. The procedures for the profile in Figure A-2 are as follows:

- Begin 30-minute denitrogenation.
- Perform 5,000 feet ear and sinus check by 2,500 feet per minute.
- Ascend main accumulator from ground level to 8,000 feet by 2,500 feet per minute.
- Ascend main accumulator from 8,000 feet to 25,000 feet by 5,000 feet per minute.
- Begin five-minute hypoxia demonstration.
- Descend main accumulator from 25,000 feet to 18,000 feet by 5,000 feet per minute for night-vision demonstration.
- Descend main accumulator from 18,000 feet to ground level by 2,500 feet per minute.
- Terminate chamber flight.

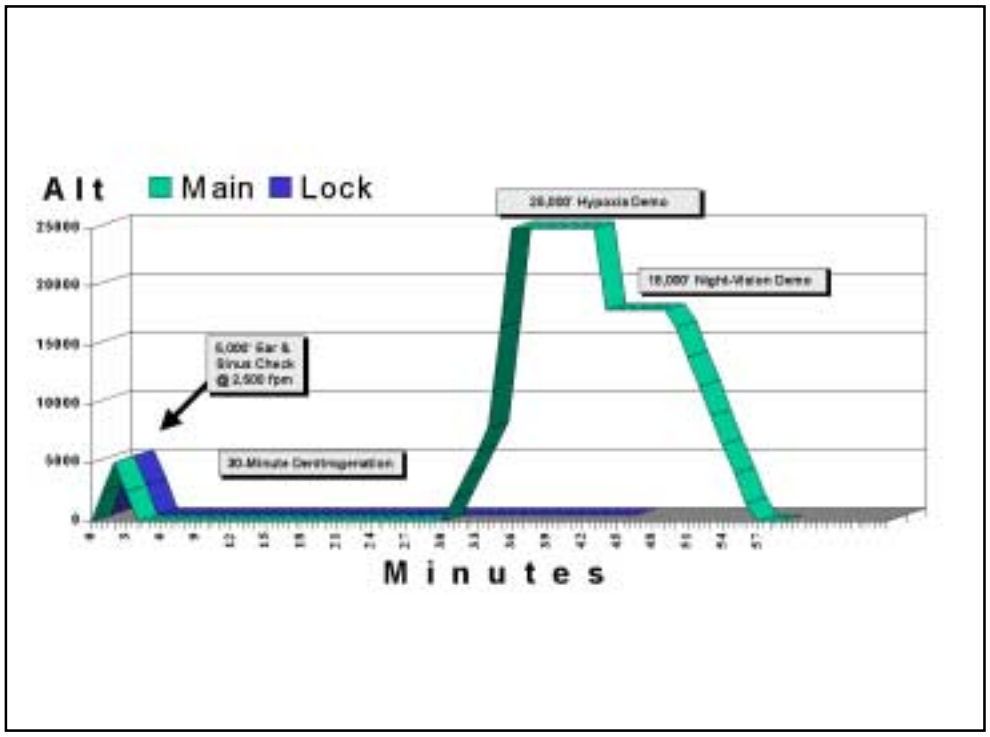

Figure A-2. Type IV, 25,000-Foot, USAF Refresher Training Profile

A-6. The procedures for the profile in Figure A-3 are as follows:

- Begin 30-minute denitrogenation.
- Perform 5,000-foot ear and sinus check by 2,500 feet per minute.
- Ascend main accumulator from ground level to 8,000 feet by 2,500 feet per minute.
- Ascend main accumulator from 8,000 feet to 25,000 feet by 5,000 feet per minute.
- Begin five-minute hypoxia demonstration.
- Descend main accumulator from 25,000 feet to 18,000 feet by 5,000 feet per minute for night-vision demonstration.
- Descend main accumulator from 18,000 feet to ground level by 2,500 feet per minute.
- Terminate chamber flight.

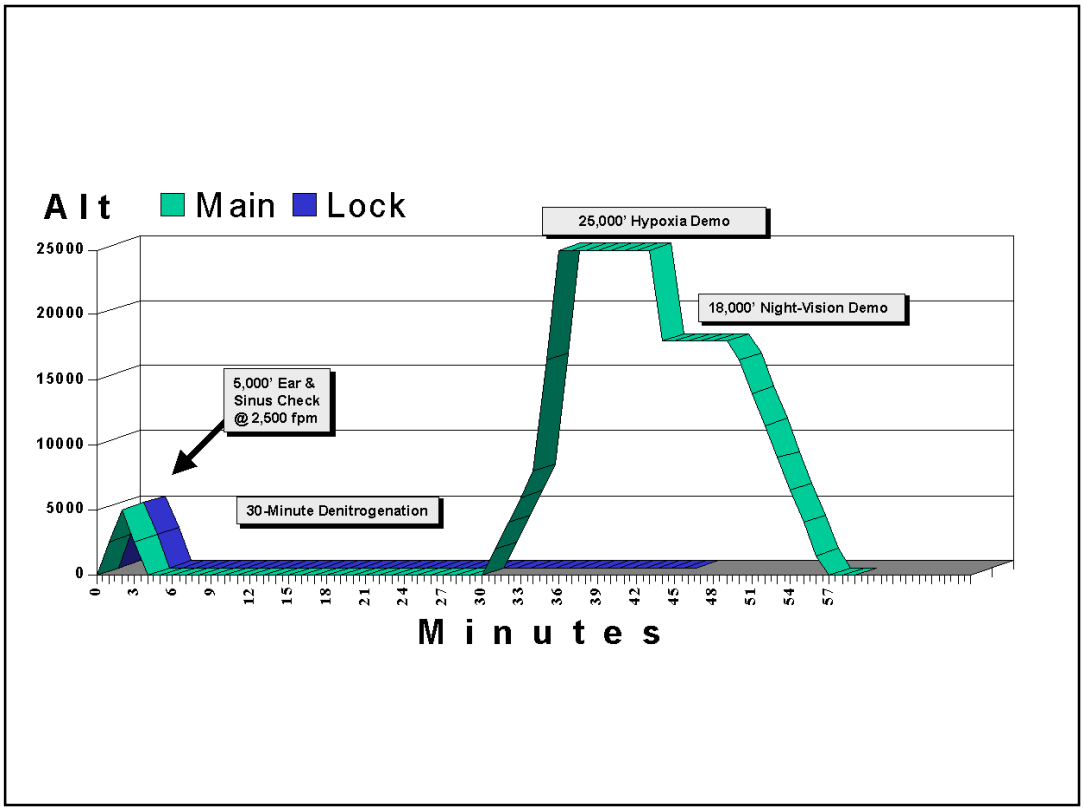

Figure A-3. Type IV, 25,000-Foot, USA Profile

A-7. The procedures for the profile in Figure A-4 are as follows:

- Begin 30-minute denitrogenation.
- Perform 5,000-foot ear and sinus check by 5,000 feet per minute.
- Ascend main accumulator, and lock to 18,000 feet by 5,000 feet per minute.
- Perform running break of main accumulator, and lock; maintain lock at 18,000 feet.
- Continue main accumulator ascent to 35,000 feet by 5,000 feet per minute.
- Ascend main accumulator to 30,000 feet for 90-second hypoxia demonstration.
- Descend main accumulator to 15,000 feet by 10,000 to 12,000 feet per minute, with lock joining descent at 18,000 feet.
- Descend main accumulator, and lock to 8,000 feet by 5,000 feet per minute.
- Ascend main accumulator to 25,000 feet by maximum rate of ascent.
- Begin five-minute hypoxia demonstration.
- Descend lock to ground level by 5,000 feet per minute.

- Descend main accumulator to 18,000 feet by 5,000 feet per minute for night-vision demonstration.
- Descend main accumulator from 18,000 feet to ground level by 2,500 feet per minute.
- Terminate chamber flight.

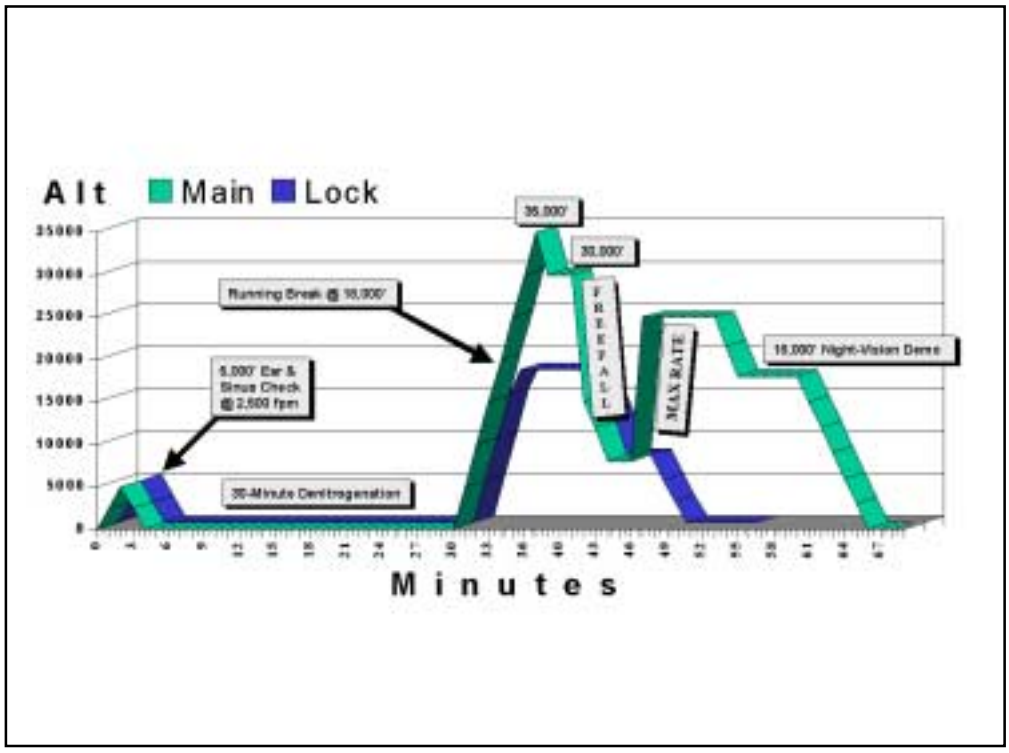

Figure A-4. Type V, 35,000-Foot, USA/USAF HAP

A-8. The procedures for the profile in Figure A-5 are as follows:

- Ascend main accumulator to 32,500 feet by maximum rate.
- Ascend lock to 8,000 feet by 2,500 feet per minute.
- Perform rapid decompression.
- Main accumulator and lock equalize at 22,500 feet.
- Descend main accumulator; lock to 18,000 feet by 5,000 feet per minute, then from 18,000 feet to ground level by 2,500 feet per minute.

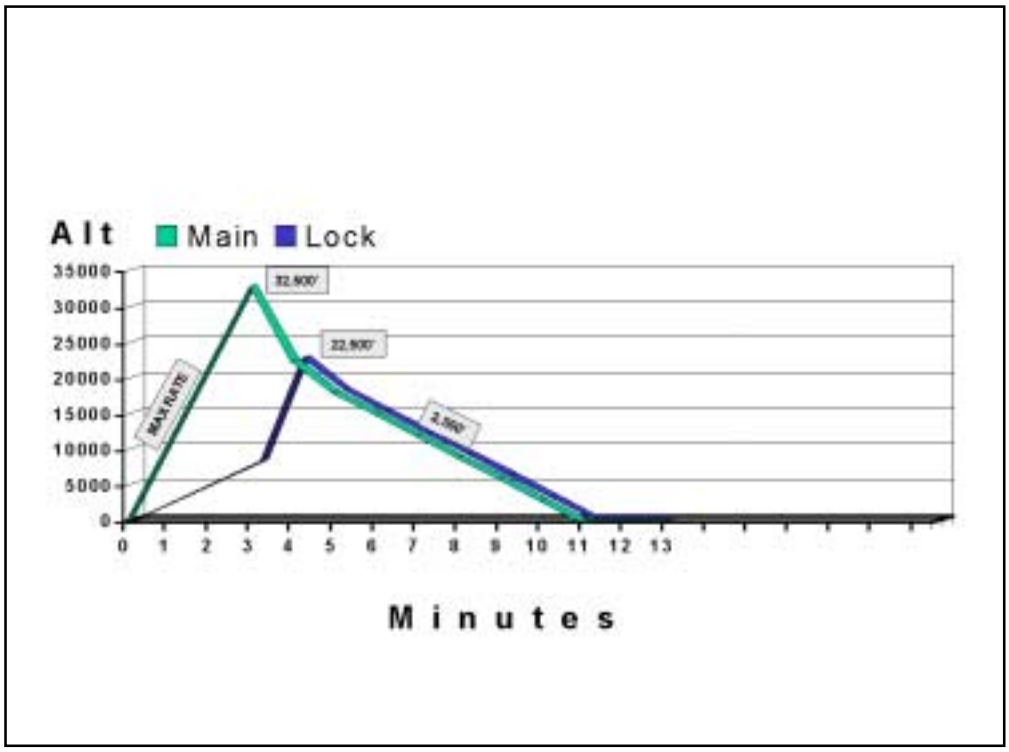

Figure A-5. Military Rapid Decompression Profile